



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,293	08/29/2001	Eugene A. Roylance	10004287-1	6642

7590 05/10/2005

HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

GRANT II, JEROME

ART UNIT	PAPER NUMBER
----------	--------------

2626

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/942,293

Applicant(s)

ROYLANCE, EUGENE A.

Examiner

Jerome Grant II

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,8-11 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 2,5-7,12-15 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8-29-2001.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

JEROME GRANT II  
PRIMARY EXAMINER

Detailed Action

1.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, 8, 10, 11, 16 and 18-20 rejected under 35 U.S.C. 102(b) as being anticipated by Hanson.

With respect to claim 1, Hanson teaches a hardware based halftoning system used in the marking engine 12, the system comprising: a raster data obtainer circuitry RIP 10 configured to obtain raster data, the data including pixels and their grayscale values; a threshold memory 20, see col. 6, lines 45-50, configured to store a matrix of threshold values; a comparator circuitry (32) see col. 6, line 66, configured to concurrently compare the threshold values of multiple entries in the matrix to the grayscale values of corresponding multiple pixels of the raster data.

Art Unit: 2626

With respect to claim 3, Hanson teaches wherein the threshold values have a halftone-depth (see col. 12, liens 1-5 and 15-20 (where the halftone density varies with respect to screen frequency), and the grayscale data has a grayscale-depth (number of gray pixels added to increase the depth visualizing the more black density).

With respect to claim 4, this claim limitation is suggested or implied by the fourth step as shown in figure 19.

With respect to claims 8 and 16, Figures 5 and 6 of Hanson convey a dither patern . See also col. 11, liens 60-65 where spot values are placed in reference cells of the memory matrix to formulate a dither matrix.

With respect to claim 10, Hanson teaches a hardware based halftoning system for use with a marking engine, the system comprising: a raster data obtainer (RIP 10) configured to raster data, the data including grayscale pixels; a threshold memory 20 for storing threshold values; a comparator circuitry 32 for comparing threshold values fo the matrix grayscale values for the purpose claimed.

With respect to claim 11, this claim limitation is clearly set forth in col. 6, lines 45-66 of Hanson

Art Unit: 2626

With respect to claim 18, Hanson teaches a halftoning module as claimed configured to raster continuous tone image data, comprising the method of:

Setting halftone depth and resolution of the threshold matrix (varying the spatial frequencies of the mask, see col. 12, lines 1-5 and 15-20). Hanson teaches obtaining raster data (RIP 10) the data including pixels and their grayscale values; loading the threshold matrix RAM 20 with threshold values; comparing threshold (comparator window 32) in the matrix to the grayscale data of corresponding pixels of the raster data.

With respect to claim 19, Hanson teaches the claimed feature. The claimed feature is inherent with respect to the third step in figure 19 in that grey-scale shapes are compared.

With respect to claim 20, this claimed limitation is suggested or inherent with respect to the 4<sup>th</sup> step in figure 19. See also col. 7, line 4.

Art Unit: 2626

2.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson in view of Hubina .

With respect to claim 9, it is not clear if Hanson teaches the use the management system embodied as ASIC. However, Hubina (US 6,876,384) clearly teaches , according to col. 4, lines 58-65, the use of ASIC for embodied logic circuits.

Since Hubina teaches the use of ASIC in the environment directed toward applicant's invention the purpose of using ASIC for a management system would have been contemplated by Hanson for the reason that Hanson shows the same specific application. It would have been obvious to one of ordinary skill in the art to modify the management system of Hanson by replacing its management type in place of the ASIC shown by Hubina for the purpose of controlling a halftone system as set forth by Hanson.

Art Unit: 2626

3.

### Claims Objected

Claims 2, 5-7, 12-15 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Grant II whose telephone number is 571-272-7463. The examiner can normally be reached on Mon.-Thur. from 9:00 to 5:00

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A. Williams, can be reached on 571-272-7471. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J. Grant II

JEROME GRANT II  
PRIMARY EXAMINER